

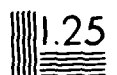
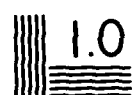
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EFFECTIVENESS OF THE CIVIL AVIATION SECURITY PROGRAM.(U)
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$$M_{\text{eff}} = \frac{\alpha}{\beta} \left(\frac{1 + \gamma}{1 - \gamma} \right) \left(\frac{1 + \delta}{1 - \delta} \right) N_0^2 \quad (\text{A.6})$$

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16. Abstract The report includes an analysis of the current threat against civil aviation along with information regarding hijacking attempts, security incidents, bomb threats, and passenger screening activity. It also summarizes ongoing activities to assure adequate protection of civil air commerce against hijacking/sabotage and related crimes, and other aspects of the Civil Aviation Security Program.			
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SEMI-ANNUAL REPORT TO CONGRESS
ON THE
EFFECTIVENESS OF THE CIVIL AVIATION SECURITY PROGRAM



JANUARY 1 - JUNE 30, 1978

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
CIVIL AVIATION SECURITY SERVICE

82 02 01 153

Langhorne Bond
Langhorne Bond
Administrator

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

October 12, 1978

WASHINGTON, D.C. 20590

Honorable Thomas P. O'Neill, Jr.
Speaker of the House of Representatives
Washington, D.C. 20515



OFFICE OF
THE ADMINISTRATOR

Dear Mr. Speaker:

I am pleased to forward the Federal Aviation Administration's Semi-Annual Report to Congress on the Effectiveness of the Civil Aviation Security Program. This report, covering the period January 1 - June 30, 1978, is submitted in accordance with Section 315(a) of the Federal Aviation Act as amended by Public Law 93-366.

Criminal acts continue to threaten the safety of civil aviation operations and effective security measures remain necessary. So far in 1978, there have been 19 airline hijackings--only 3 of U.S. airlines--throughout the world. This represents a continuation of the high level of worldwide hijackings evidenced by the 30 that occurred during 1977.

The cornerstone of the U.S. program--the passenger screening system--continues to prevent weapons from being carried aboard aircraft. In the 5 1/2 years this system has been in effect, no U.S. hijackings have resulted from the introduction of real firearms or explosives. In that same period, almost 2 billion persons have been screened. These procedures have resulted in over 16,000 firearms detected and more than 5,000 persons arrested. A further measure of effectiveness is our estimate that some 74 hijackings or related crimes may have been prevented by the security measures in place.

Many initiatives are underway to achieve effective security standards throughout the world. The July 17, 1978, Bonn Declaration on Hijacking represents a major step forward in mobilizing the international community towards actions to eliminate aircraft hijacking from the world scene.

In all our efforts, aviation safety is the first priority. The U.S. Civil Aviation Security Program has demonstrated a proper balance of adequate security with the primary purpose of the system--the reliable, efficient, safe and secure flow of people and property.

A report has also been sent to the President of the Senate.

Sincerely,

A handwritten signature in dark ink, appearing to read "Langhorne Bond".
Langhorne Bond
Administrator

Enclosure

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I. INTRODUCTION

This is the eighth Semi-Annual Report to Congress on the Effectiveness of the U.S. Civil Aviation Security Program. It covers the six-month period January 1 - June 30, 1978, and is submitted pursuant to Section 315(a) of the Federal Aviation Act as amended by the Air Transportation Security Act of 1974 (Public Law 93-366).

The report includes an estimate of the current threat against civil aviation along with information regarding hijacking and sabotage incidents, bomb threats and passenger screening activity. It also summarizes ongoing activities to assure adequate protection of civil air commerce against hijacking/sabotage and related crimes.

II. EXECUTIVE SUMMARY

The Threat. The continuing acts of aircraft hijacking and sabotage, coupled with the growing cooperation and alliances between terrorist organizations, indicate that the threat of criminal acts against civil aviation is significant throughout the world. Current estimates reflect that the greatest danger remains in Europe and the Middle East.

The worldwide increase in hijackings that occurred during 1977 continued at a similar level during the first six months of 1978. Fourteen airline hijackings occurred during this reporting period. If this trend continues, the number of hijackings will approximate the 30 air carrier hijackings which occurred during 1977. This trend indicates that the hijacking threat persists and that further improvements are necessary to assure universal application of effective international security measures.

Acts of terrorism continue to pose a threat to civil aviation throughout the world. During this reporting period 1 of the 14 air carrier hijackings was terrorist inspired. Of the 30 airline hijackings in 1977, 5 fell into the terrorist category. In May 1978, terrorists armed with submachineguns and explosives opened fire on departing El Al passengers at Orly Airport in Paris. Five persons were killed and 5 others were injured in the attack.

Eleven of the 14 airline hijackings during this period involved foreign air carriers. Of these 11 hijackings, 4 were successful. These incidents involved aircraft of

7 nations with hijackers boarding at 10 different airports. In at least 6 of these incidents, the weapons involved were introduced through the normal passenger boarding process. These weapons should have been intercepted by effective passenger and carry-on baggage screening procedures.

The United States experienced 3 air carrier hijackings during this reporting period. None were successful and none occurred because of real weapons penetrating the screening system.

During the first six months of 1978, 38 criminal acts against civil aviation occurred worldwide, resulting in 29 deaths and 112 injuries. Twelve of these incidents, resulting in 1 death and 1 injury, involved U.S. civil aviation. Worldwide, since 1974, criminal acts against civil aviation have resulted in 643 deaths and 601 injuries, with 116 deaths and 110 injuries resulting from acts against U.S. civil aviation.

Incidents. During the period covered by this report, there were 3 U.S. air carrier hijackings. None were successful--in two of the incidents the hijackers surrendered and in the third the hijacker was subdued by passengers and crew. There were no injuries to passengers or crewmembers in any of the incidents. During this same period, 11 hijackings of foreign air carrier aircraft occurred--4 of which were successful.

Three hijackings of U.S. general aviation aircraft occurred during this reporting period. One of the three was successful. In another one of the incidents, the hijacker was shot and killed during the foiled attempt.

On May 22 three incendiary devices ignited and burned at the three major airports serving New York City. Little property damage was incurred and no injuries were reported as a result of the incidents.

Some 653 bomb threats were directed against U.S. aircraft and airports during the first six months of 1978. These threats resulted in numerous flight delays and diversions, as well as airport and aircraft searches and evacuations.

Passenger Screening. Since 1973 no U.S. hijackings have resulted from real firearms or explosives passing undetected through passenger screening points.

Though not infallible, the effectiveness of the U.S. passenger screening system is demonstrated by the fact that there has been only one successful hijacking of a U.S. air carrier since November 10, 1972. During this same period there have been 44 successful hijackings of foreign air carriers throughout the world.

During the period covered by this report, 836 handguns were detected during the screening process. In 403 cases, weapons were detected under circumstances which led to the arrest of individuals involved. Most of these individuals were charged with violations of local statutes.

Since January 1973 over 1.8 billion persons have been processed through the nations' security screening checkpoints. Over 16,000 firearms have been detected and over 5,000 related arrests have occurred under local or Federal charges. Furthermore, an estimated 74 possible hijackings or related crimes may have been prevented by these security measures.

Security Actions. The U.S. Civil Aviation Security Program currently involves 36 U.S. and 72 foreign airlines in addition to 35 air taxi/commercial operators who have voluntarily adopted FAA-approved security programs. These U.S. and foreign airlines operate some 14,000 scheduled passenger flights each day to and from 623 U.S. and foreign airports boarding over 700,000 passengers and over one million pieces of carry-on baggage daily.

A major revision of the regulation that established basic airport security requirements is nearing final rulemaking action. One major element of the revision would provide flexibility for airport operators in meeting requirements for law enforcement presence and capability to protect persons traveling in air transportation from criminal acts. The proposed change would permit officers to patrol airport terminals provided that they could immediately respond to the passenger screening point as needed. Such arrangements could enhance overall terminal security and also result in more efficient use of police personnel at airports where this alternative is feasible.

Recent changes in passenger charter qualifying requirements (Civil Aeronautics Board Regulations) have resulted in the elimination of several previously "built-in" security

safeguards. In light of these changes, the Federal Aviation Regulations pertaining to aircraft security (U.S. and foreign) were revised to require that operators of public charter flights have security programs similar to those required of air carriers in scheduled operations to include 100% screening of passengers and their carry-on luggage. This new requirement, effective July 25, 1978, will apply to the charter operations of 30 flag and domestic certificated air carriers, the operations of 7 supplemental (all-charter) carriers, the charter operations of 6 commercial carriers that conduct scheduled intrastate passenger service and the charter operations of some 100 foreign air carriers that operate into and out of the United States.

Experience gained over the past two years revealed that certain changes were necessary to the regulations governing Carriage of Escorted Persons and Carriage of Weapons Aboard Aircraft. The change related to the Carriage of Escorted Persons regulation redefined the number of armed escorts required to escort persons aboard aircraft. Further, persons under voluntary protective escort were exempted from the requirements set forth for escorted persons. Amendments to the Carriage of Weapons regulation set forth additional requirements to be adhered to by passengers and air carriers to assure that firearms being carried in checked baggage are transported in a safe and secure manner. It also provides relief for hunters and other sportsmen by eliminating the requirement that long guns, being transported as checked baggage, be carried in locked containers.

Aggressive research and development efforts continue to improve security screening equipment and to minimize passenger inconvenience. Emphasis is being placed on developing new techniques and equipment to effectively and efficiently detect explosives at airports, in checked baggage, in cargo and on aircraft. A number of airport operational tests have been conducted and more are scheduled. Explosives detection methods currently being explored include x-ray absorption, nuclear magnetic resonance, thermal neutron activation and vapor detection.

During this reporting period efforts to achieve common and optimal security measures continued on the part of international organizations such as the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA), the European Civil Aviation Conference (ECAC) and the International Criminal Police Organization

(INTERPOL). ICAO, for example, considered certain proposals for additional specifications intended to promote more effective safeguards in civil aviation security worldwide. Other international organizations took initiatives to enhance current procedures and to foster an atmosphere of support and assistance in achieving the common goal of security in international air transportation.

Compliance and Enforcement. The Civil Aviation Security Program is implemented through a series of Federal Aviation Regulations which are, as any laws, subject to both inadvertent and deliberate violations. During the first six months of 1978, FAA completed 437 investigations involving alleged violations by airports, U.S. and foreign air carriers and by passengers. Eighteen of these cases resulted in civil penalties amounting to \$12,400.

Outlook. The high level of hijackings throughout the world and the attractiveness of civil aviation as a target of criminal acts indicate that effective security measures remain necessary. The current U.S. Civil Aviation Security Program has demonstrated the capability of meeting the current threat while at the same time serving the primary purpose of the system--the reliable, efficient, safe and secure flow of people and property. Passenger reactions indicate that the current procedures are desired and expected in the interest of aviation security.

III. CURRENT THREAT AGAINST CIVIL AVIATION

Aircraft hijackings and sabotage continue to threaten the lives and property of persons traveling in civil air commerce. The high level of worldwide hijackings continued during this reporting period which indicates that the threat of hijacking persists and that effective and continuing civil aviation security measures remain necessary.

Acts of terrorism continue to pose a threat to civil aviation throughout the world. Cooperation and alliances between terrorist organizations continued during this period as did mutual training, financial assistance and exchange of sophisticated weaponry and technical aid by sympathetic nations in the Middle East and Africa.

The greatest danger remains in Europe, the Middle East and, to a lesser degree, in South America. Terrorist groups in Europe and the Middle East continued to strengthen their coordination and contacts with revolutionary groups,

thus increasing the possibility of terrorist criminal acts against international targets, including acts by one organization on behalf of another. Terrorist activity in South America continued to be curtailed during this reporting period due to successful security operations which have restricted the capability of terrorist groups to conduct criminal operations. In the Far East, terrorist violence has been at a low level except for the militant/dissident criminal acts and demonstrations against Narita Airport in Japan. However, the activities of guerrilla groups have increased in the Central American countries of El Salvador, Guatemala and Nicaragua. In the U.S., Cuban anti-Castro and Puerto Rican extremist groups continued their criminal attacks and threats against civil aviation. On May 22 three incendiary devices were detonated at the three major airports serving New York City (JFK, La Guardia and Newark). The FALN, a Puerto Rican extremist group, claimed credit for the bombings.

The worldwide increase in hijackings that occurred during 1977 continued at about the same level during this six-month period. There were 18 hijackings during the first six months of 1978--14 scheduled air carrier flights and 4 general aviation flights. Four of the 14 air carrier hijackings were successful. In comparison, 15 air carrier hijackings occurred during the last six months of 1977 of which 9 were successful.

The majority of the hijackings during this period were against European and Latin American air carriers--three involved U.S. air carriers. These worldwide hijackings were predominantly committed by mentally deranged persons or individuals looking for personal gain or political asylum. It is significant to note that the majority of the airline hijackings are not committed by terrorists. Of the 14 air carrier hijackings which occurred during this six-month period, only 1 could be included in the political terrorist category. In the case of the foreign hijackings, it appears that many of the weapons involved were introduced through the normal passenger boarding process and should have been intercepted by effective passenger and carry-on baggage screening procedures.

In response to the continued high level of hijackings, the FAA issued an advisory bulletin to the international aviation community. This bulletin highlighted the continuing high

trend in the level of hijackings and emphasized the need for effective and tighter application of ongoing screening procedures in addition to adequate training and supervision of screening personnel.

While the hijacking threat persists, acts of sabotage continue to pose a serious and increasing threat to civil aviation. During the first six months of 1978 a total of 38 criminal acts worldwide were perpetrated against civil aviation, compared to a total of 34 criminal acts which occurred during the last six months of 1977. The 38 incidents during this period resulted in 29 deaths and 112 injuries. Eighteen of these acts were hijackings; 8 consisted of explosions at airports, on aircraft and at airline offices; 4 included live or hoax explosive devices discovered at airports and at airline offices; 2 involved terrorist attacks at airports; and 6 other incidents involved acts against aircraft and aviation facilities, including sabotage. Twelve of the incidents resulting in one death and one injury involved U.S. civil aviation.

Since 1974, worldwide criminal acts against civil aviation have resulted in 643 deaths and 601 injuries. Of those, 116 deaths and 110 injuries resulted from acts committed against U.S. civil aviation.

(See Exhibits 1 & 2)

IV. INCIDENTS DURING REPORTING PERIOD

Hijacking, sabotage and threats of criminal acts against U.S. civil aviation continued during the first six months of 1978.

Hijackings - There were 3 air carrier hijackings and 3 general aviation hijackings during this reporting period. None of the air carrier hijackings were successful. One of the general aviation hijackings was successful.

- o Air Carrier Aircraft - Hijackings of U.S. air carrier aircraft continued during this reporting period at a level equivalent to the previous six-month reporting period. These incidents are described below:

(See Exhibits 3 & 5)

- On January 28 a male passenger hijacked a Piedmont Airlines aircraft while it was on the ground at Kinston, North Carolina. The man claimed to have a gun and demanded to be taken to Cuba. The aircraft departed Kinston and landed in New Bern, North Carolina, for refueling. Shortly after departure from New Bern the hijacker was distracted by a crewmember and was subsequently overpowered by crewmembers and passengers. The man did not have a gun. He was subsequently convicted on charges of air piracy and interference with flight crew and was sentenced to 50 years in prison.
- On March 13 a United Air Lines aircraft was hijacked by a male who claimed to be armed with an explosive device. Shortly after departure from San Francisco the man handed a stewardess a note demanding to be taken to Memphis, Tennessee. The aircraft diverted to Oakland where all passengers and all but three crewmembers deplaned. After departure from Oakland the hijacker demanded to go to Cuba. The aircraft landed at Denver where the three remaining crewmembers escaped from the aircraft leaving the hijacker alone aboard the aircraft. Shortly thereafter, the man surrendered to authorities. He had no explosives in his possession. The hijacker was ruled legally insane and has been committed to a state hospital in Colorado.
- On April 1 a young male armed with a .22 caliber rifle attempted to hijack a Piedmont airlines aircraft during the boarding process at Byrd Airport in Richmond, Virginia. All passengers and all but one crewmember managed to deplane while a conversation ensued between the pilot and the hijacker. The pilot and co-pilot subsequently exited the aircraft leaving only the hijacker aboard. Negotiations eventually resulted in the young man surrendering to authorities. It was later discovered that the man gained entry to the airport through an open gate. The hijacker received a suspended sentence conditional upon psychiatric treatment and evaluation.

- o General Aviation Aircraft - Although current civil aviation security requirements do not extend to general aviation, hijackings of general aviation aircraft continue to be a matter of concern. During this reporting period there were three hijackings of general aviation aircraft.

(See Exhibit 4)

- On January 24 a man holding hostages at Homedale, Idaho, requested and received a small aircraft in which he demanded to be taken to Mexico. The aircraft landed at Winnemucca, Nevada, at which time the nosewheel tire of the aircraft was shot out by law enforcement officers. Negotiations began between the hijacker and authorities and a few hours later the man released the pilot and surrendered to officials. The hijacker was subsequently convicted on Federal and local charges of kidnapping and was sentenced to concurrent sentences of 25 years and life imprisonment.
- On May 24 a helicopter was hijacked by one armed female who demanded that the pilot fly the aircraft to a Federal penitentiary in Marion, Illinois. A struggle ensued between the pilot and the hijacker in which the pilot gained control of the weapon and fatally shot the hijacker. The pilot regained control of the aircraft and landed safely. The hijacking was part of an attempt to secure the release of three prisoners being held at the penitentiary.
- On June 30 a small aircraft was hijacked by three prisoners who were being transported from Pueblo to Greeley, Colorado. One of the three handcuffed prisoners was able to obtain a choke hold on the pilot and forced him to land the aircraft in a small field where all three then subsequently escaped.

Aircraft/Airport Sabotage - Four explosive/sabotage incidents involving U.S. aircraft or airports occurred during this reporting period.

- o On May 22 three incendiary devices ignited and burned at New York's Kennedy, La Guardia and Newark Airports. The devices detonated in a smoke shop at Kennedy, in

a men's room at La Guardia and in a gift shop at Newark. The incendiaries caused little property damage and no reported injuries. Responsibility for the explosions was claimed by the FALN, a Puerto Rican liberation organization.

- o On June 10 a hoax device was discovered near a freight building at Kennedy Airport. Although the device was made to appear real, it contained no explosive elements.

Bomb Threats - Threats involving the use of explosives against aircraft and airports in the U.S. decreased by 27% over the previous reporting period. The 488 bomb threats against aircraft represents a 23% decrease from the 647 reported in the last six months of 1977. It is especially encouraging to note that for the fourth consecutive six-month reporting period bomb threats directed against airports have decreased--from 250 in the last six months of 1977 to 165 during the first six months of 1978. Four threats during the reporting period were accompanied by extortion demands to the airlines or airports involved.

(See Exhibits 6 & 7)

A distinction has been made between frivolous and serious types of bomb threats. A separate analysis of serious threats, as defined in Exhibit 6, provides an account of the adverse effects on the aviation industry.

Of the 488 bomb threats against aircraft from January to June 1978, 255 were in the serious category. About 83% (212) of the serious threats were received telephonically. The others were made either verbally, at screening points or other locations, or in written or visual form. The threats against aircraft resulted in at least 132 reported flight delays or diversions and at least 206 aircraft searches, each contributing to passenger inconvenience and disruption of airline operations. The threats were not concentrated against any particular airline--they involved 43 air carriers, including 18 foreign. Thirty-one or about 12% of the serious threats were directed against foreign air carriers in the U.S.

Almost all of the 165 bomb threats against airports had to be taken seriously since 89% were received under circumstances that made immediate evaluation difficult. These threats resulted in at least 24 evacuations of airport facilities, at least 115 searches and contributed to numerous air carrier flight delays. The threats involved 63 airports across the nation.

A large increase in airport bomb threats occurred following the explosion at La Guardia Airport on December 29, 1975. That increase in threats was attributed to the wide publicity given to that tragic incident. A significant reduction in airport bomb threats has occurred during this reporting period. If the present trend continues, bomb threats against airports will be at their lowest level since 1973.

Aircraft and airport bomb threats resulted in 19 reports of persons arrested under Federal or local statutes. Five resulted in Federal charges and 14 others were charged with violations of local statutes. Final prosecutive disposition has not been reported in the Federal cases. Two of the local cases resulted in fines and the final disposition of the remaining cases has not yet been reported.

Possible Hijackings or Related Crimes Prevented - The number of hijacking attempts or other crimes against civil aviation prevented or deterred by airline and airport security procedures cannot be determined with certainty. However, the number of firearms detected at passenger screening points under suspicious circumstances and the number of individuals apprehended while attempting to gain unauthorized access to aircraft indicate that some of these individuals were intent on committing a crime. In at least two incidents it appears that the individuals involved intended to commit a crime against aviation and were prevented from doing so by airline and airport security procedures. This makes a total of 74 possible hijackings or related crimes that may have been prevented since January 1974--strong evidence of the effectiveness of the security measures in use. The two incidents referred to during this reporting period are summarized below:

(See Exhibit 8)

- o After a male passenger alarmed a weapons detector he was asked to remove all metal objects and to walk through the device again. The man removed some metal objects, placed them in the tray and walked through the device alarming it once more. The source of the alarm was eventually discovered to be a .45 caliber revolver wrapped in foil which was in the man's boot. The individual was arrested and offered some resistance as he was being taken into custody. He was subsequently charged with the offense of carrying a concealed weapon and may stand trial at a later date.

- o A suitcase carried by a male passenger passed through the x-ray device and the operator requested to physically inspect the luggage. The passenger stated that he had lost the keys to open the bag which was secured with padlocks. He further stated that the undiscernible areas which had appeared on the x-ray screen were license plates and later changed his mind and stated it was a gift for his mother. The locks were finally opened and the unidentified object was discovered to be a .9mm handgun. The man was charged with attempting to carry a weapon aboard an aircraft.

V. EFFECTIVENESS OF PASSENGER SCREENING PROGRAM

Airline passenger screening procedures continue to effectively prevent weapons and dangerous articles from being carried aboard aircraft. All passengers and their carry-on items are screened prior to boarding all scheduled flights.

Screening equipment consisting primarily of walk-through weapons detectors for individuals and x-ray inspection systems for carry-on items is currently in use. Efforts are continuing to improve screening equipment and to minimize passenger inconvenience. Reactions by the public to passenger screening procedures indicate that they desire and expect these procedures in the interest of aviation security.

(See Exhibits 9 & 10)

It appears that the majority of the foreign air carrier hijackings committed between January 1977 and June 1978 occurred because of inadequate passenger screening procedures. Effective passenger screening procedures should have detected and intercepted the weapons utilized in many of those incidents. In contrast to the foreign experience, no U.S. air carrier hijackings since 1973 have resulted from real firearms or explosives passing undetected through passenger screening points.

The system is not infallible. However, its effectiveness is clearly demonstrated by the fact that there has been only one successful hijacking of a U.S. air carrier since November 10, 1972. During this same period there have been 44 successful hijackings of foreign air carriers throughout the world. This outstanding U.S. record is even more impressive when it is considered that U.S. aviation activity is roughly equal to the activity of the rest of the free world combined.

As seen in Exhibit 3, the current U.S. passenger screening program, initiated in 1973, brought about a dramatic decrease in hijacking attempts against U.S. air carrier aircraft--from 27 in 1972 to 1 in 1973. In 1974 there were 3 attempts against U.S. air carriers; in 1975 there were 6; in 1976 there were 2; in 1977 there were 5 and during the first six months of 1978 there were 3. Since January 1973 over 16,000 firearms have been detected during passenger screening procedures resulting in over 5,000 arrests under local or Federal charges.

Reporting and analytical procedures relating to the detection of items during the screening process are focused on those weapons and dangerous devices considered to present the greatest threat to aviation security. Specifically, the analysis of passenger screening activities concentrates on the detection of firearms and explosive/incendiary devices along with related intelligence, arrest and prosecutive information.

More than 275 million persons (passengers and non-passengers) were processed through the airline screening points at the nation's 450 air carrier airports during this reporting period. The detection of 962 firearms during this period represents a 17% decrease from the 1,160 firearms detected during the previous period. All categories of firearms decreased this period. A total of 836 handguns were detected this six-month period as compared to 985 detected during the last six months of 1977. Of these 836, 704 were discovered through x-ray inspection of carry-on items, 75 by weapons detector screening of individuals and 57 by physical search of carry-on items.

(See Exhibit 11)

Arrests decreased during the subject reporting period. In 403 incidents, firearms were detected under circumstances which led to the arrest of individuals under Federal or local statutes. These 403 arrests occurred in the operations of 18 U.S. air carriers at 77 airports. Twenty-four large hub airports (e.g., Los Angeles and Chicago) accounted for 265 or 66% of the arrests, and 20 medium hub airports (e.g., Memphis and Anchorage) for 63 or 16% of the arrests. The other 75 arrests,

accounting for 18% of the total arrests, occurred at 33 small and non-hub airports (e.g., Little Rock and Richmond).

The 403 reported firearms arrests included 397 cases in which local charges were filed and 6 cases in which Federal charges were filed. Of the 397 local cases, 101 resulted in fines or penalties of confinement, probation or supervision. Charges were dismissed in 47 cases and the prosecutive disposition of the remaining 249 local cases has not yet been reported. The six Federal cases resulted in 2 convictions and 4 dismissals.

Public education efforts have been initiated to make a broader section of the public aware that it is a violation of the law to attempt to carry a weapon aboard an aircraft. There is continued evidence that the public education program is producing positive results in reducing the number of weapons being carried into airports. In Birmingham, Alabama, and Memphis, Tennessee, concerted efforts have been made by the local communities to publicize the Civil Aviation Security Program. Both of these airports evidenced a significant decrease in the number of weapons detected during this six-month period. Firearms detected at Birmingham decreased from 45 during the last six months of 1977 to 31 during this six-month period, a reduction of 31%. A more substantial reduction occurred in Memphis where 19 firearms were detected during this reporting period as compared to 43 firearms detected during the last six months of 1977, representing a reduction of 56%.

These public education efforts have been initiated at other airports with salutary results. These programs will continue with particular efforts being directed toward those airports which record the highest number of firearms detections.

VI. CIVIL AVIATION SECURITY ACTIONS

Airport and airline security measures continue to provide protection for air travelers at a level unmatched in any other mode of transportation. These particular security measures currently involve 36 U.S. and 72 foreign airlines operating over 14,000 scheduled passenger flights each day to and from 623 U.S. and foreign airports and boarding some 700,000 passengers and over one million pieces of carry-on baggage daily. In addition, over 35 air taxi/commercial operators have voluntarily adopted and are currently abiding by security programs.

(See Exhibit 12)

The concept of shared responsibilities involving airlines, airports, local communities, the Federal Government and the passengers continues to produce an effective Civil Aviation Security Program. Basic policies guiding the program recognize airline responsibilities for the safety of passengers, baggage and cargo in their care as well as for the safeguarding of their aircraft. Similarly, airport operators are responsible for maintaining a secure ground environment and for providing local law enforcement support for airline and airport security measures. And finally, with the inclusion of security costs in the operating expenses of U.S. air transportation systems, the passengers--ultimate beneficiaries of the security program--are directly involved in paying the costs in domestic airline fares.

(See Exhibit 13)

During this reporting period, a number of significant actions were taken to maintain the high level of security for U.S. civil air commerce:

Airport Security - Although airport operators continue to maintain a high standard of security awareness and vigilance at U.S. air carrier airports, actions have been initiated to provide this security more efficiently. Some of the contributing initiatives are highlighted below:

- o Federal Aviation Regulations Part 107 - The last three Reports to Congress contained details of a project to revise Federal Aviation Regulations Part 107 to clarify and update the rules and to modify them in accordance with Public Law 93-366, The Air Transportation Security Act of 1974. The proposed new rules were published in the Federal Register June 16, 1977, as Notice of Proposed Rule Making, No. 77-8. The civil aviation industry, U.S. and foreign government agencies, and a large number of individuals commented on the proposal. All views and arguments have received careful consideration in connection with a final rulemaking action which is scheduled for issuance in the near future.

As pointed out in previous Reports, one of the most far-reaching proposals in Notice No. 77-8 is the alternative approach to the requirement for fixed law enforcement presence at passenger screening points. Under the current rule, officers are required to remain at a fixed station at passenger screening points. Under the proposed rule the officers, under certain conditions, would be allowed to patrol the terminal area provided that they could immediately respond to the screening point if needed. Such arrangements could enhance overall

terminal security and could also result in more effective use of police personnel. To test the proposed alternative under a variety of conditions, exemptions to the current requirement were granted to three airports at Dallas and Houston, Texas, and at Lincoln, Nebraska.

The Dallas-Fort Worth Regional Airport (DFW) utilizes patrolling law enforcement officers supported by sophisticated communications devices, to include closed circuit television (CCTV). The system at DFW is currently being tested by airport personnel and FAA security specialists to evaluate the system under all conditions. These tests are revealing that officers, without exception, can respond to screening stations upon demand in well under 60 seconds.

Similar grants of exemption to the other two airports were made in order to evaluate different approaches to the flexible police response concept. The exemption at Houston Intercontinental Airport, based on the relatively unique configuration of that terminal, will permit the use of patrolling officers with communications capability in the terminal and in the aircraft ramp area. Implementing procedures have been approved by the FAA and installation of communications equipment is scheduled for completion in the near future.

The Lincoln Municipal Airport, because of its small size and unusual configuration in the area of screening stations, utilizes a system whereby one officer patrols between two adjacent screening points. The system which has been in successful operation since mid-1977 uses standard communications equipment between the patrolling officer, the screening stations and back-up law enforcement support.

The data gathered from these tests will be utilized for continued analysis of flexible response systems at other appropriate screening stations. The tests that have been conducted to date clearly indicate that this system can provide, under certain conditions and with careful planning, a more comprehensive level of aviation security for the traveling public.

Another progressive innovation directed toward more efficient utilization of available manpower at smaller airports is an ongoing test of the feasibility of one person carrying out the dual functions of law enforcement and passenger screening. Presently, this concept is restricted to a few low volume airports. This innovation requires that the one person must be a law enforcement officer who has adequate control over the entire passenger screening environment. Analysis of this system indicates that it satisfactorily meets the needs of some small airports.

- o Civil Aviation Security Training School - A special aviation security training program was established in 1973 at the Transportation Safety Institute in Oklahoma City. This course is primarily designed for local law enforcement officers assigned to support airline and airport security programs. The tuition, travel and per diem costs of these officers are funded by the Law Enforcement Assistance Administration (LEAA). The current 8-day course provides indepth coverage of civil aviation security requirements, procedures and techniques. As of July 1978, 84 classes have been conducted for 1983 students including 1429 local police officers, 238 foreign students, 255 FAA employees, 37 representatives of other U.S. Government agencies and 24 aviation industry officials. In addition to the formal classes at Oklahoma City, special 2-day seminars, attended by 1508 persons, have been conducted at 21 airports located at key cities across the nation.
- o Explosives Detection Dog Teams - During 1972, in cooperation with the LEAA, FAA sponsored a program to strategically locate specially Air Force-trained explosive detection dog teams in key cities near major airports. The concept was to position the teams so that this emergency support would be readily available to threatened aircraft flying over the United States. During 1977, six additional cities joined the program to bring the total number of airports providing this emergency support to 30. To date, in actual explosive detection missions, the teams have detected 24 explosive items in the course of 2448 aircraft and airport searches. In addition, they have conducted 3717 explosive searches in their local communities, detecting 95 additional explosive items.

(See Exhibit 14)

During this reporting period some of the annual proficiency evaluations of the teams were completed indicating that the K9 teams have maintained approximately a 96% detection surety rate with a false bomb alert rate of about 8%. Average search times still range from 20 minutes for terminal building areas to 9 minutes for vehicles. Aircraft search times averaged 16 minutes, baggage areas 11 minutes and cargo areas 18 minutes.

(See Exhibit 15)

Aircraft Security - The Air Carrier Standard Security Program, which became effective in January 1976, has now been adopted by all U.S. scheduled air carriers. The conscientious implementation by the airlines of the procedures contained in this program has resulted in more efficient and uniform airline security procedures and performance. The following significant steps were taken to supplement existing procedures and to promote increased effectiveness in industry wide security procedures.

- o Charter Flight Operators - Recent changes in charter flight procedures and operations have resulted in the elimination of several previously "built-in" security safeguards. Additional liberalized rules to charter operations were proposed in March 1978 by the Civil Aeronautics Board (CAB) which would become effective sometime in 1978. These changes in chartering requirements along with the increase in the number of hijackings and terrorist inspired activities throughout the world caused the FAA to conclude that regulatory action was needed which would require security screening of passengers traveling on most charter flights.

Therefore, in March 1978, a Notice of Proposed Rule-making was published in the Federal Register. Reaction to this proposal, with minor changes, was favorable and a final rule was adopted to be effective on July 25, 1978, requiring that charter passenger flights open to the public be provided security screening.

The new requirement will apply to the charter operations of 30 flag and domestic certificated carriers, the operations of 7 supplemental (all-charter) carriers, the charter operations of 6 commercial carriers that conduct scheduled intrastate passenger service and the charter operations of approximately 100 foreign carriers. This action will add approximately 11 million passengers annually who will be subject to preboard passenger screening.

- o Carriage of Weapons and Escorted Persons Aboard Aircraft - Experience gained over the past two years indicated that minor changes were necessary in the rules pertaining to the Carriage of Firearms and to Persons Under Escort Aboard Air Carrier Aircraft. Accordingly, Sections 121.584 and 121.585 of Federal Aviation Regulations Part 121 were amended in April of 1978.

In the rule pertaining to Carriage of Escorted Persons (FAR 121.584), the ratio of persons under escort to the number of armed escorts required was redefined and persons under voluntary protective escort were exempted from the requirements set forth for escorted persons. Changes in the Carriage of Weapons rule (FAR 121.585) aboard all Part 121 carriers were effected whereby a distinction was made between requirements pertaining to long guns (shotguns and rifles) and to short guns (pistols). The amended rules now permit long guns to be carried in unlocked checked baggage containers. Not only must the passenger declare that the gun is present but also the air carrier must now obtain from the passenger a declaration that the weapon is unloaded.

- o Use of X-ray Security Systems - On April 24, 1978, Amendments to Federal Aviation Regulations Part 121 and 129 became effective to require that certificate holders post signs to inform passengers that they have a right to request that a physical inspection be made of their photographic equipment and film packages without exposure to an x-ray system. The amended regulations further require that a copy of the latest radiation survey be maintained at the certificate holder's principal business office (except for foreign air carriers) and at the location where the x-ray system is in operation.
- o International Security Costs - Public Law 94-353 (49 U.S.C. 1356a) effective July 12, 1976, required the Secretary of Transportation to compensate any air carrier certificated by the CAB under Section 401 of the Federal Aviation Act of 1958, that requests such compensation for certain costs attributable to the screening of passengers moving in foreign air transportation. A Notice of Proposed Rulemaking to implement the law was published with a comment closing date of December 15, 1977. Comments were received and are being studied prior to final rulemaking action.

- o Foreign Air Carriers - Seventy-two foreign air carriers are currently covered by Federal Aviation Regulation Part 129 which requires them to implement security programs similar to those used by U.S. air carriers.

Program reviews and onsite assessments during this reporting period reveal a positive attitude on the part of the foreign air carriers to comply with security requirements.

Research and Development - Research and development efforts continue to improve security screening equipment and to minimize passenger inconvenience. Emphasis is placed on developing new and improved techniques and equipment to efficiently and effectively detect explosives at airports, in checked baggage, in cargo and on aircraft. New equipment must be reliable, easily maintained and capable of being operated by relatively unskilled personnel. It must not present safety hazards or damage luggage or its contents and airports, airlines and passengers must be able to afford them.

All known systems and methods for detecting explosives are being explored. The current status of techniques being pursued is as follows:

- o X-Ray Absorption - An x-ray absorption concept (automatic computer-based analysis of the size, shape and x-ray opacity of checked baggage contents) is being studied. Two experimental models have been built and used at Washington National and Newark International Airports to gather data on checked baggage. An operational test conducted in December 1977 at Newark demonstrated that sufficient detection capabilities existed to warrant further aggressive and expeditious development. It is planned that the two experimental model systems be refurbished and upgraded to allow testing for reliability and maintainability. Those systems should be available in 1980.
- o Nuclear Magnetic Resonance - This technique involves the detection of a characteristic response of explosive molecules when they are subjected to pulsed magnetic and radio frequency fields. A prototype checked baggage system using this technique is being designed and fabricated under a current contract. A scale model was constructed and a demonstration of the feasibility of this concept was conducted in the spring of 1978. An airport operational prototype unit is being built for an airport evaluation to be conducted between October 1978 and September 1979.

- o Thermal Neutron Activation - The technical feasibility of this concept (identification of explosives by means of the unique nuclear reaction of the nitrogen atoms present in explosives) has been demonstrated. A current contract calls for the design and construction of a portable system which can be tested at different airports. The first tests are planned for June 1979.
- o X-Ray Fluorescence - A study contract was initiated to evaluate the x-ray fluorescence concept (excitation of unique fluorescent reradiation from blasting caps due to normal constituents or added materials). Results of the study contract determined that this technique was impractical for an airport environment. The project to explore this technique has been cancelled and no further work will be accomplished.
- o Vapor Detection - A long-range program is underway to identify the types and quantities of unique vapors associated with different types of explosives. Tentative results are promising, however, the final results will not be compiled before December 1979.
- o Least Risk Bomb Location Studies - The need for emergency procedures to assure the safety of personnel and equipment if a suspect explosive device is encountered during flight has long been recognized and, as a result, a program of analytical studies to develop and verify the emergency procedures was initiated in 1972. The validation test has continued through this reporting period and the last of a series of six reports has been completed and distributed to the appropriate air carriers. Additionally, these procedures have been incorporated in a revised version of a film designed for the purpose of assisting air carriers in the training of their crewmembers for threat situations. The film has been distributed to all domestic air carriers and to numerous foreign air carriers.

(See Exhibits 16 & 17)

International Activities - Since 1975, the Semi-Annual Reports to Congress have highlighted the continuing problem of worldwide hijackings and the increasing worldwide concern about criminal acts against civil aviation. In 1977 there

were 30 scheduled airline hijackings--twice as many as in 1976 and more than in any year since 1972. The continued high level of hijackings has continued during this six-month period.

Since 1970 there has been substantial improvement in aviation security measures throughout the world. This has resulted in increased protection for the users of civil aviation. Many governments have developed and implemented effective aviation security programs. These developments led to a significant reduction in acts of air piracy prior to the 1977 increase in hijackings.

International organizations, such as ICAO, IATA, INTERPOL, ECAC and Orient Airlines Association (OAA), are continuing collective efforts to achieve common and optimal security standards and to assure close cooperation between aviation security and law enforcement authorities throughout the world.

In 1968 there were no international aviation security standards. Since then, substantial improvements have been achieved primarily through ICAO. These include the formulation and adoption of International Standards and Recommended Practices on aviation security contained in Annex 17 to the Chicago Convention and the publication of an ICAO Security Manual. Other significant actions since 1968 include the adoption of the Hague and Montreal Conventions providing for extradition or prosecution of persons responsible for hijackings and acts of sabotage against aviation facilities.

During the first six months of 1978 positive initiatives were taken to achieve common and effective security standards among countries throughout the world. Some of the more significant actions which contribute to safer air travel are as follows:

- o International Civil Aviation Organization - During this period the Council of ICAO at the 8th Meeting of its 93rd Session considered certain proposals for additional specifications with the ultimate purpose of achieving more effective security safeguards in international civil aviation. Those proposals were sent to all member States in May 1978 for comment by August of this year. Annex 17 was previously amended with an applicability date of August 10, 1978.

ICAO held its first African Regional Conference in March in Dakar, Senegal. An FAA representative was in attendance along with 70 delegates representing all of the West African countries in addition to numerous observers representing various international airport and air carrier organizations. The Conference contributed significantly to the enhancement of security at West African Airports.

- o International Air Transport Association - IATA's membership includes over 100 of the world's major international airlines. IATA continually strives to enhance existent security measures by soliciting their member airlines to seek the support of their respective governments in fully implementing IATA's recommended minimum security procedures.
- o European Civil Aviation Conference - The United States has been invited to attend two ECAC meetings later this year. The first will be an ECAC Security Working Group meeting which will be held in September. In October the ECAC Facilitations Committee will hold a meeting in Paris. The U.S./FAA participation serves to maintain effective relationships with European government aviation security officials. Further, it contributes to international cooperation and mutual assistance in aviation security activities.
- o International Criminal Police Organization - During this period, INTERPOL held its First International Symposium on Prevention of Unlawful Interference with Civil Aviation. Fifty nations were represented including the United States whose delegation was led by an FAA representative. The Symposium emphasized the need for improved international aviation security, identified specific problem areas and developed proposed action for dealing with certain technical security problems.
- o Orient Airlines Association - In May, representatives of FAA attended a security seminar of the Orient Airlines Association conducted in Manila, Philippines. The conference was attended by approximately 100 delegates representing 15 countries. The FAA representatives gave presentations on the current threat against aviation and on aviation explosives security. The conference covered a broad scope of aviation security topics and led to the exchange of valuable information among the attendees relative to aviation security.

- o Foreign Technical Assistance - FAA continues to pursue a bilateral program of technical assistance and exchange of information. In response to the high level of hijackings which has continued during this six-month period, FAA emphasized to the aviation community the need for effective and ongoing screening procedures along with adequate training and supervision of screening personnel. In 1977 an offer was made to make available to other nations standards and procedures used by the U.S. to assure effective operation of passenger screening equipment. These procedures have been requested by and provided to 38 nations.

Numerous countries have requested the assistance of FAA technical assistance teams. These teams visit airports in the various countries to conduct surveys and to provide advice and assistance in improving the civil aviation security programs of the nations involved. These technical teams are generally funded through an Interagency Agreement with the Law Enforcement Assistance Administration. To date, the teams have carried out assistance visits to 26 countries.

Also available, upon request, are indepth briefings on all aspects of civil aviation security for foreign aviation and law enforcement officials. Officials from 65 countries have been provided these technical briefings. A number of audiovisual training presentations have also been developed and made available to many officials of foreign airlines and governments.

(See Exhibit 17)

VII. COMPLIANCE AND ENFORCEMENT

The Civil Aviation Security Program is implemented through a series of Federal Aviation Regulations and, as with any laws, these regulations are subject to both inadvertent and deliberate violations. The approach taken by the FAA is to prevent violations, to the greatest extent possible, by fostering an atmosphere of voluntary compliance and cooperative actions to promptly correct any deficiencies and weaknesses.

At times, there are instances of failure to comply with the regulations. These alleged violations are investigated and appropriate corrective actions are taken. These actions include the issuance of Warnings, Letters of Correction, or

in more serious cases, assessment of civil penalties. During the first six months of 1978, 437 investigations were completed involving alleged violations of FAA security regulations by airports, U.S. and foreign air carriers, and by passengers. Eighteen resulted in civil penalties amounting to \$12,400; 364 were closed with administrative corrective action, including 211 warnings issued to air carriers and airport operators. In 55 cases, the alleged violations were not substantiated and no enforcement actions were taken.

(See Exhibit 18)

VIII. OUTLOOK

The threat of criminal acts against civil aviation remains as real and present today as ever. Security measures over the past number of years have been substantial and have proven to be effective and successful in meeting the challenge of threats of air piracy and other criminal acts against aviation. The dynamic nature of air transportation, however, requires a constant vigilance over the many facets involved in achieving and maintaining effective and necessary security. Thus, solutions to the problems of achieving these goals must not remain static, rather they must constantly be evaluated and enhanced to meet the ever-changing nature of the industry and of the posed threat.

U.S. aviation security measures appear to be capable of meeting and containing the present threat while at the same time serving the primary purpose of the system--the reliable, efficient, safe and secure flow of people and property.

CIVIL AVIATION SECURITY

THE THREAT TO U.S. AVIATION

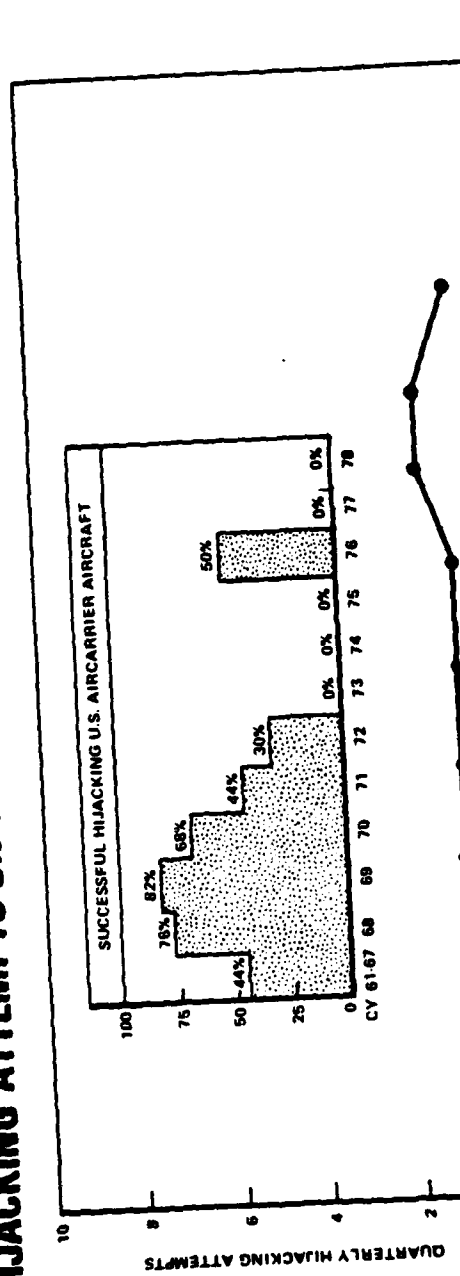
	1961-7	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978*
Hijackings	12	22	40	27	27	31	2	7	12	4	6	6
Explosions:												
Aircraft	2	1	1	2	1	1	2	3	2	2	1	0
Airports						2	2	4	4	2	3	3
Explosive												
Devices Found:												
Aircraft					1	2	2	1	1	1	2	0
Airports					5	5	3	11	5	3	1	1
Bomb Threats To:												
Aircraft			400	601	1145	2156	1383	1453	1853	1950	1229	488
Airports					212	288	239	387	449	1036	519	165

ACS-20
* As of 7/1/78

Worldwide Criminal Incidents Involving Civil Aviation

Year	Deaths	Injuries	Total Incidents	Hijackings (Scheduled Air Carriers)	
				Foreign	U.S.A.
1968	2	2	30	13	17
1969	35	7	92	47	40
1970	92	32	82	56	25
1971	31	9	73	31	25
1972	159	96	88	31	27
1973	104	75	73	20	1
1974	170	59	62	19	3
1975	88	162	64	13	6
1976	227	200	55	13	2
1977	129	68	69	25	5
as of July 1, 1978	29	112	38	11	3

* Statistical data prior to 1970 are approximations.



HIJACKING BY QUARTER	CY 1976				CY 1977				CY 1978			
	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH
TOTAL	0	0	1	1	1	1	1	2	2	1		
SUCCESSFUL	0	0	1	0	0	0	0	0	0	0		
INCOMPLETE ^{2/}	0	0	0	0	0	0	1	2	2	0		
UNSUCCESSFUL	0	0	0	1	1	1	0	0	0	1		

CY	HIJACKING ATTEMPTS ON U.S. SCHEDULED AIR CARRIER AIRCRAFT ^{1/}												Total
	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1978	
TOTAL	9	17	40	25	25	27	1	5	2	5	3	183	
Successful	4	13	33	17	11	8	0	0	0	1	0	87	
Incomplete ^{2/}	1	1	4	8	14	1	1	1	1	0	3	37	
Unsuccessful	4	3	6	6	5	0	2	5	1	2	1	39	

^{1/} Includes commercial operators engaging in intrastate common carriage covered by Code of Federal Regulations Title 14 Part 121.7

^{2/} Hijacking in which hijacker is apprehended while in flight or during hijacking as a result of "hot pursuit"

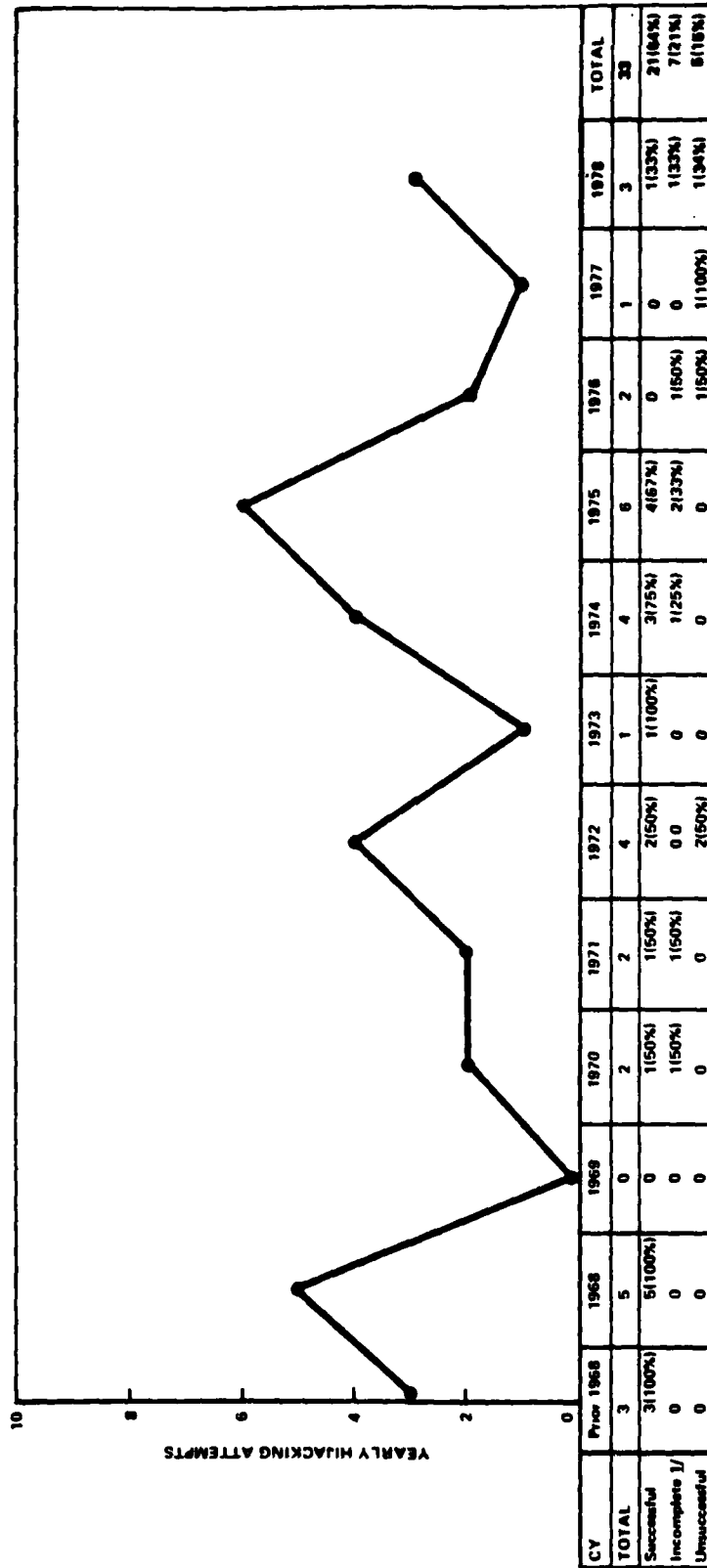
U.S. AIRCRAFT CARRIER HIJACKING ATTEMPTS SINCE JANUARY 1, 1976										REMARKS	
DATE	AIRLINE/FLT	NUMBER ABOARD	ORIGIN	DESTINATION	HIJACKER	DEST/OBJECTIVE	FLIGHT	REMARKS			
6/10/76	TWA/385/8727	82	New York, NY	Chicago	Propaganda	Successful	4 males captured	1 female captured			
12/21/76	UA/100/DC8	2	San Fran, CA	New York	Unknown	Unsuccessful	1 male captured				
1/11/77	TWA/100/8747	333	New York, NY	London	Unknown	Unsuccessful	1 male captured				
8/8/77	NW/227/8747	261	Tokyo	Moscow	Unknown	Unsuccessful	1 male captured				
8/20/77	WA/560/8702	31	San Diego, CA	Denver, CO	Unknown	Unsuccessful	1 male captured				
10/20/77	PAL/101/8737	34	Grand Island, NEB	Lincoln, NEB	Unknown	Unsuccessful	1 male captured				
12/25/77	FAL/688/DC8	38	Jacksonville, FL	Atlanta, GA	Unknown	Unsuccessful	1 male captured				
1/20/78	PI/864/VS11	14	Krasnodar, USSR	Washington, D.C.	Unknown	Unsuccessful	1 male captured				
3/13/78	UA/886/8727	75	San Fran, CA	Seattle	Unknown	Unsuccessful	1 male captured				
4/1/78	PI/864/8737	88	Chicopee, MA	Richmond	Unknown	Unsuccessful	1 male captured				

Updated By: ACS
Source: ACS-20

Department of Transportation
Federal Aviation Administration

As Of: 7/1/78

HIJACKING ATTEMPTS ON U.S. GENERAL AVIATION AIRCRAFT



GENERAL AVIATION HIJACKING ATTEMPTS SINCE JANUARY 1, 1978									
DATE	AIRCRAFT	NUMBER ABOARD	FLIGHT		HIJACKER	REMARKS			
			ORIGIN	DESTINATION					
4/18/78	Piper Navajo	3	Grand Island, NEB	None	Missile	Incomplete 1 male killed			
5/13/78	Cessna 210	3	Denver, CO	Houston, TX	Snatch	Unsuccessful 1 male captured			
1/8/77	Piper Cherokee	4	Stamford, N.C.	Raleigh, N.C.	Unknown	Unsuccessful 2 males captured			
1/24/78	Cessna 208	2	Honolulu, HI	None	Missile	Unsuccessful 1 male captured			
5/24/78	Boeing Stearman	2	St. Louis, MO	Cape Girardeau, MO	Missile	Incomplete 1 female killed			
6/30/78	Piper Seneca	4	Pueblo, CO	Granger, CO	To escape	Successful 1 male captured			

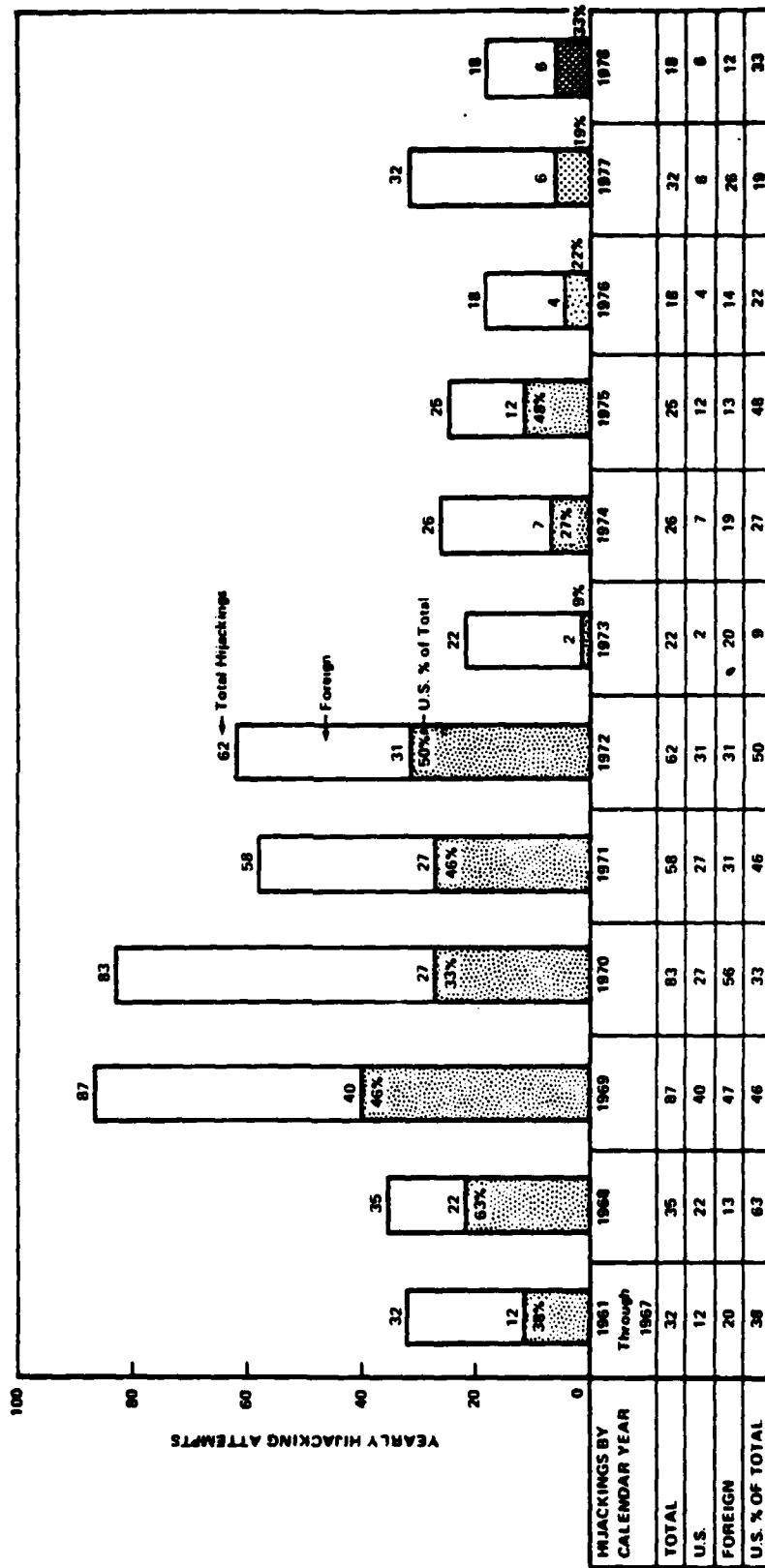
1/ Hijacking in which hijacker is apprehended/killed during hijacking or as a result of "hot pursuit."

Updated By: ACS
Source: ACS 20

Department of Transportation
Federal Aviation Administration

As Of: 7/1/78

HIJACKING ATTEMPTS ON U.S. AND FOREIGN AIRCRAFT ★



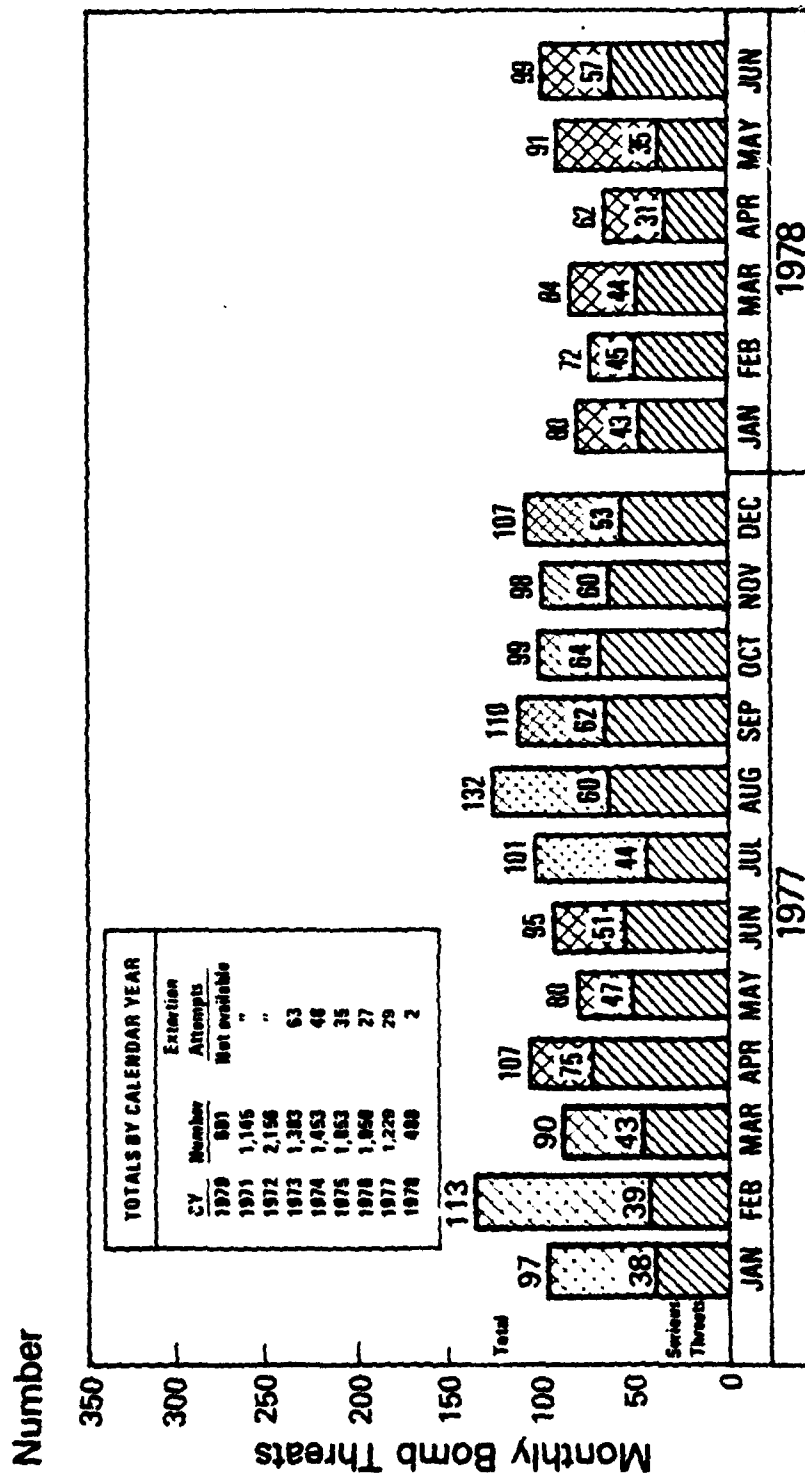
★ Includes General Aviation

Updated By: ACS
Source: ACS-28

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

As Of: 7/1/78

BOMB THREATS AGAINST U.S. AIRCRAFT AND FOREIGN AIRCRAFT IN THE U.S.



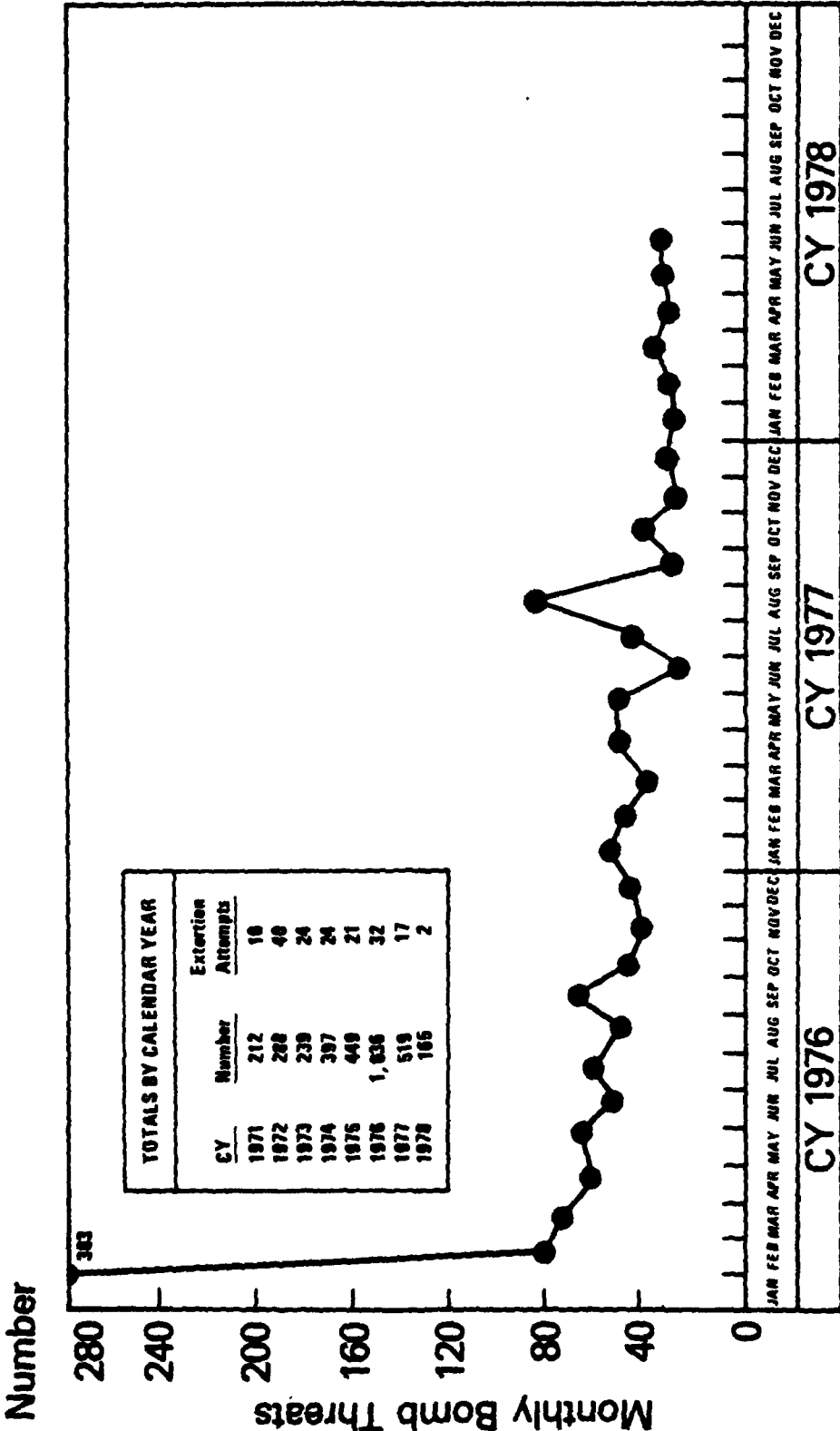
ANALYSIS

A statement is considered a serious threat if one of the following occurs:

1. It is directed against a particular aircraft or flight.
2. It is not possible to immediately determine if it is made in a joking manner.
3. It results in inconvenience to other passengers.
4. It results in a search or otherwise disrupts airline operations.

EXHIBIT 6

BOMB THREATS AGAINST U.S. AIRPORTS

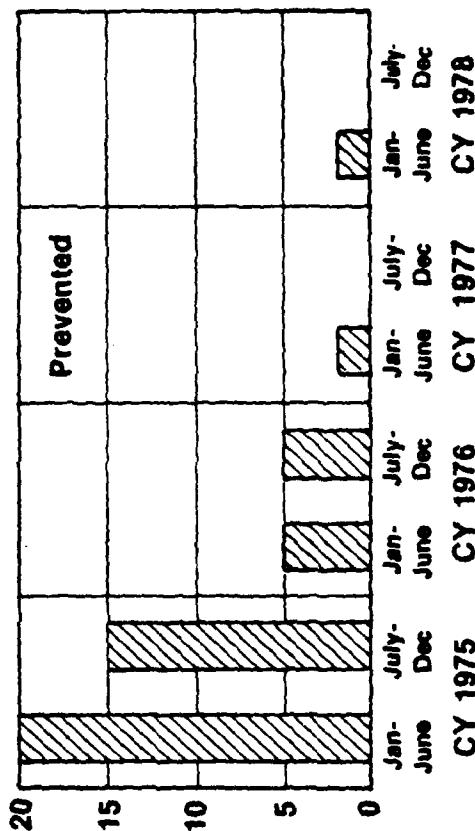
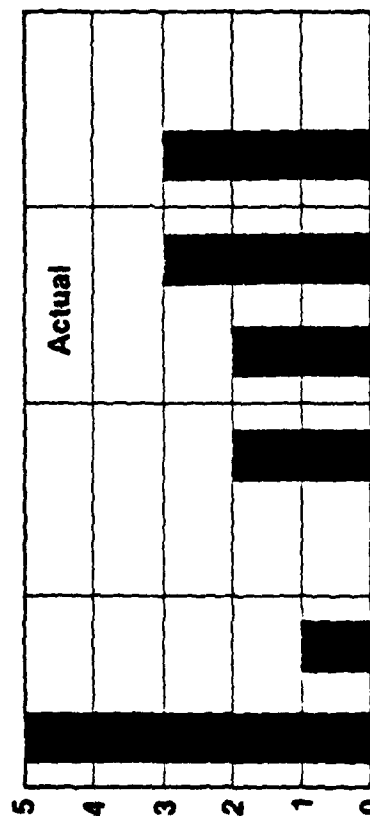


As Of: 7/1/78

ACTUAL HIJACKINGS & PREVENTED ATTEMPTS (U.S. AIR CARRIER AIRCRAFT)

Prevented Attempts

Incidents in which it appeared the individuals involved intended to hijack an aircraft but were prevented from doing so by security procedures.



Means of Access — Point Of Detection				
	1975	1976	1977	1978
Screening Point	22	10	7	4
Air Operations Area	9	1	0	1
Terminal	4	1	0	0
Other	6	0	0	0

Weapons Summary									
	1975	1976	1977	1978		1975	1976	1977	1978
Firearm	1	22	0	1	1	1	1	1	3
Explosive Device	0	0	1	0	3	0	1	0	0
Other	0	13	0	0	0	1	0	0	0

CIVIL AVIATION SECURITY WEAPON DETECTION DEVICES

<u>Type</u>	<u>Basic Characteristics</u>	<u>Manufacturer</u>	<u>Units</u>
Walk-Thru Active	Creates and Measures Deviations in Own Electric Field. Detects Both Ferrous And Non- Ferrous Metals.	Rens Infinitics Metor Westinghouse Sperry Rand Solco Sentry	712 144 94 36 36 19 13 <u>1054</u>
Hand-Held Active	Comparable To Walk- Thru Active. Limited Effective Range.	Rens Federal Solco	230 250 720 <u>1200</u>
	Total — All Types — 2254		ACS-200 7/1/78

CIVIL AVIATION SECURITY

X-RAY BAGGAGE INSPECTION SYSTEMS

Characteristics:

Small Dose X-Ray, Intensify Image Electron-ically, Display on TV

Operating Criteria:

Meet FDA/BRH and State Health Standards Distinguish 24 Gauge Wire

Limitations:

Dependent on Diligence of Operators, Demands Constant Attention and Ability to Quickly Recognize Dangerous Articles

Systems In Use:

Astrophysics	252
Phillips Electronic Instruments	98
Bendix	98
American Science & Engineering	51
New Security Concepts	38
Dennis & Miller	28
Total:	565

CIVIL AVIATION SECURITY **AIRLINE PASSENGER SCREENING RESULTS** **JAN 1976 - JUNE 1978**

	1976		1977		1978	
	Jan--June	July--Dec	Jan--June	July--Dec	Jan--June	July--Dec
Persons Screened (Millions)	191.1	222.5	243.1	265.7	275.2	
Weapons Detected						
Firearms	2840	1096	874	1160	962	
(1) Handguns	1054	859	745	985	836	
(2) Long Guns	101	35	24	40	34	
(3) Other	1685	202	105	135	92	
Explosive/Incendiary Devices	7	1	2	3	1	
Persons Arrested						
For Carriage of Firearms/Explosives	422	462	370	440	404	
For Giving False Information	119	37	23	21	31	
Other Offenses Detected						
Narcotics	176	156	156	126	151	
Illegal Aliens	382	416	474	483	723	
Other	734	415	151	242	706	

Source -- Monthly Reports Of Passenger Screening Activities At U.S. Airports

CIVIL AVIATION SECURITY

	<u>U.S.</u>	<u>FOREIGN</u>	<u>TOTAL</u>
Carriers	36	72	108
Airports	450	173*	623
Aircraft	2,500	—	—
Flights Per Day	13,600	550	14,150
Passengers Per Day	662,000	40,000	702,000
Carry-On Items Per Day	993,000	60,000	1,053,000

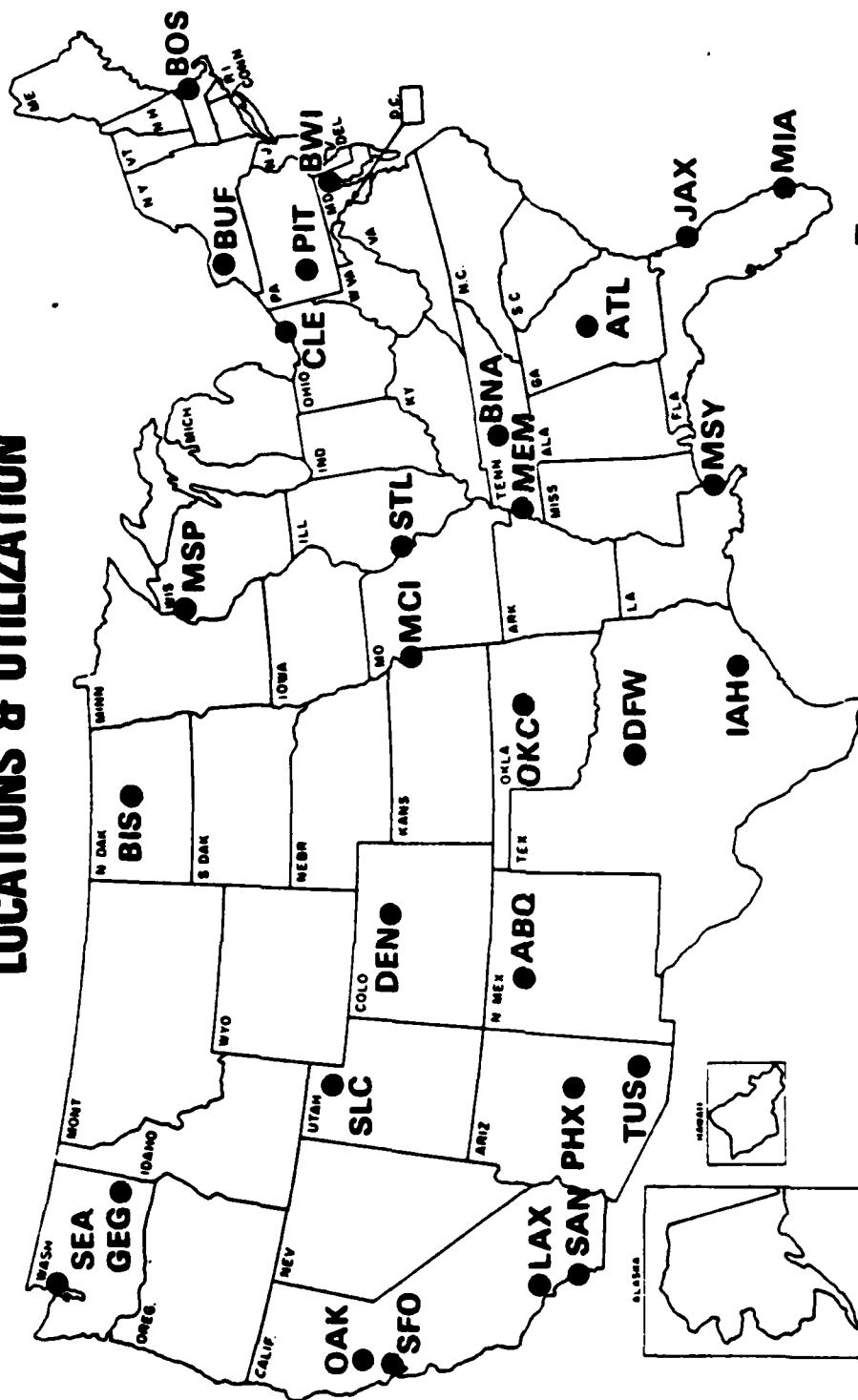
* Foreign Airports Served By U.S. Carrier And/Or Final Departure Point For Foreign Carrier Flights To The U.S.

As Of: 7/1/78

CIVIL AVIATION SECURITY BASIC POLICIES

<u>PROGRAM ELEMENT</u>	<u>RESPONSIBILITY</u>	<u>ACTIONS</u>
AIR CARRIERS	SECURE TRAVEL	<ul style="list-style-type: none"> • MAINTAIN RESPONSIVE SECURITY PROGRAMS • SCREEN PASSENGERS, CARRY-ON ITEMS • SECURE BAGGAGE, CARGO PROCEDURES • PROTECT AIRCRAFT
AIRPORTS	SECURE OPERATING ENVIRONMENT	<ul style="list-style-type: none"> • MAINTAIN RESPONSIVE SECURITY PROGRAMS • PROTECT AIR OPERATIONS AREA • PROVIDE LAW ENFORCEMENT SUPPORT
FAA	LEADERSHIP	<ul style="list-style-type: none"> • IDENTIFY AND ANALYZE THREAT • PRESCRIBE SECURITY REQUIREMENTS • COORDINATE SECURITY OPERATIONS • PROVIDE TECHNICAL ASSISTANCE • ENFORCE REGULATIONS
USERS	PROGRAM COSTS	<ul style="list-style-type: none"> • SECURITY FUNDED AS OPERATING COST OF SYSTEM

FAA SPONSORED EXPLOSIVE DETECTION K9 TEAMS LOCATIONS & UTILIZATION



AIRCRAFT & AIRPORT SEARCHES	2448	SJU●
EXPLOSIVE ITEMS DETECTED	24	
MISSIONS IN LOCAL COMMUNITIES	3717	
EXPLOSIVE ITEMS DETECTED	95	
TOTAL EXPLOSIVE ITEMS DETECTED	119	AS OF: 7/1/78

EXPLOSIVE DETECTION K9 TEAM EFFECTIVENESS

Average Search Times Required

Aircraft	16 Minutes
Terminal Buildings	20 Minutes
Vehicles	9 Minutes
Cargo Areas	18 Minutes
Baggage Areas	11 Minutes

Reacted to Explosive Plants — 96.6 %
False Alerts — 8.2 %

Source: FY 77 Evaluations.

**CIVIL AVIATION SECURITY
RESEARCH AND DEVELOPMENT
CHECKED BAGGAGE EXPLOSIVE DETECTION**

X-RAY ABSORPTION

Prototype Carry-On Baggage System Tested
Two Units Designed For Checked Baggage Being Built
• First Unit Tested Nov 76
• Second Unit Operationally Tested in Dec 1977

THERMAL NEUTRON ACTIVATION

Feasibility Demonstration Completed
Prototype Unit Being Designed For Evaluation

NUCLEAR MAGNETIC RESONANCE

Technical Feasibility Has Been Demonstrated
Prototype Unit Being Developed For Evaluation

VAPOR DETECTION

Transportation Systems Center Has Evaluated All Commercially Available Detectors. Program Underway To Identify Unique Vapors Associated With Different Types Of Explosives.

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CIVIL AVIATION SECURITY FOREIGN TECHNICAL ASSISTANCE

<u>ACTIONS</u>	<u>COUNTRIES PARTICIPATING</u>
• FAA Technical Assistance Team Visits	26
• Aviation/Law Enforcement Officials Briefings	65
• Training Programs:	
— TSI Course (Students)	(63) (238)
— Antihijacking Tactics	26
— Ground Explosive Procedures	60
— Inflight Explosive Procedures	73
• Analytical Studies Distribution	15

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CIVIL AVIATION SECURITY COMPLIANCE AND ENFORCEMENT ACTIONS

U.S. AIR CARRIERS	1973	1974	1975	1976	1977	1978*
Warnings	—	—	329	270	276	118
Letters of Correction	152	124	128	110	109	71
Non Enforcement Actions	66	36	63	108	61	41
Civil Penalties (Amount)	43 (\$42,850)	58 (\$75,750)	56 (\$45,300)	84 (\$48,800)	43 (\$66,700)	13 (\$9,550)
Investigations Closed	261	216	576	572	489	243
Investigations Pending					61	39

FOREIGN AIR CARRIERS	NO Regulation Applicable	1976	1977	1978*
Warnings	0	0	0	0
Letters of Correction	0	12	11	7
Non Enforcement Actions	3	2	2	1
Civil Penalties (Amount)	0	0	0	0
Investigations Closed	3	14	13	8
Investigations Pending			2	4

AIRPORTS	NO Regulation Applicable	1976	1977	1978*
Warnings Issued	—	141	137	93
Letters of Correction	40	68	53	35
Non Enforcement Actions	11	18	23	5
Civil Penalties (Amount)	1 (\$1,000)	14 (\$8,750)	12 (\$3,500)	4 (\$2,750)
Investigations Closed	32	246	225	137
Investigations Pending			23	32

INDIVIDUALS	NO Regulation Applicable	1976	1977	1978*
Administrative Corrections	1	27	81	40
Non Enforcement Actions	2	41	24	8
Civil Penalties (Amount)	1 (\$25)	1 (\$350)	4 (\$2050)	1 (\$100)
Investigations Closed	4	66	109	49
Investigations Pending			14	5

*As Of: 7/1/78

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